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10/797,384	03/10/2004	Yun Namkoong	04-06	3202

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EXAMINER	
DANG, HUNG Q	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/797,384	NAMKOONG ET AL.	
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/13/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 3 and 4 are objected to because of the following informalities: claims 1, 3, and 4 recite steps A and B. Direct descriptive language should be used instead. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8, 12-14, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached).

Regarding claim 1, Makita et al. disclose a method of retrying reading or writing of data, comprising: (A) determining a required time period for performing a retrying type of reading or writing of the data ([0012]); and (B) terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time ([0012]).

Regarding claim 2, Makita et al. also disclose starting to time down from the retrying limitation time after a request for reading or writing of the data is generated ([0015]).

Regarding claim 3, Makita et al. also disclose determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and performing steps (A) and (B) if said error has occurred ([0012]).

Regarding claim 8, Makita et al. also disclose performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time ([0012]).

Claim 12 is rejected for the same reason as discussed in claim 1 above.

Claim 13 is rejected for the same reason as discussed in claim 2 above.

Claim 14 is rejected for the same reason as discussed in claim 3 above.

Claim 19 is rejected for the same reason as discussed in claim 8 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-6 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached) as applied to claims 1-3, 8, 12-14, and 19 above, and further in view of Kanota et al. (US Patent 6,363,211).

Regarding claim 4, see the teachings of Makita et al. as discussed in claim 1 above. However, Makita et al. do not disclose determining whether the data is a

predetermined type of data; and performing steps (A) and (B) only if the data is the predetermined type of data.

Kanota et al. disclose determining whether the data is a predetermined type of data (column 9, lines 3-6); and performing retries only if the data is the predetermined type of data (column 9, lines 7-15; column 8, lines 21-31).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of determining whether the data is a predetermined type of data; and performing retries only if the data is the predetermined type of data as disclosed by Kanota et al. into the method disclosed by Makita et al. to ensure data availability in case of AV data. The incorporated feature will make less likely that AV data is interrupted or absurdly stopped during playback because of data unavailability; thus, enhance the quality of playback.

Regarding claim 5, Kanota et al. also disclose the predetermined type of data is A/V (audio or video) data (column 9, lines 3-15).

Regarding claim 6, Kanota et al. also disclose when the data is not the predetermined type of data then performing retries (column 9, lines 3-15 with predetermined type of data being non-AV data)" while Makita et al. further disclose determining a total count of retries for the reading or writing of the data ([0013]; [0014]); performing another retry if the total count of retries is not greater than a predetermined maximum number of retries ([0013]; [0014]); and terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries ([0013]; [0014]).

Claim 15 is rejected for the same reason as discussed in claim 4 above.

Claim 16 is rejected for the same reason as discussed in claim 5 above.

Claim 17 is rejected for the same reason as discussed in claim 6 above.

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached) as applied to claims 1-3, 8, 12-14, and 19 above, and further in view of Sato et al. (JP Application No. 09-217835 - reference will be made to a copy of its translation attached).

Regarding claim 7, see the teachings of Makita et al. as discussed in claim 1 above. However, Makita et al. do not disclose determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table; and determining the required time period for the retrying type from the lookup table.

Sato et al. disclose determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table ([0007], [0008], [0009]); and determining the required time period for the retrying type from the lookup table ([0009]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of determining the retrying type of reading or writing and determining the required time period from a lookup table as disclosed by Sato et al. into the method disclosed by Makita et al. for efficiency reason (see Sato et al., [0009]).

Claim 18 is rejected for the same reason as discussed in claim 7 above.

Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached).

Regarding claim 9, see the teachings of Makita et al. as discussed in claim 1 above. Further, Makita et al. also disclose the data is read or written within a magnetic disc drive ([0010]). However, Makita et al. do not disclose the magnetic disk drive to be a hard disk drive.

It is noted that hard disk drives are very well known in the art at the time of invention. Thus, Official Notice is taken.

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the hard disk drive into the method disclosed by Makita et al. because of hard disk drives' large capacity and small access time.

Claim 20 is rejected for the same reason as discussed in claim 9 above.

Claims 10-11 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanota et al. (US Patent 6,363,211) and Makita et al. (JP Application No. 10-138420 – reference will be made to a copy of its translation attached).

Regarding claim 10, Kanota et al. disclose a method of reading or writing of data, comprising: determining whether the data is a predetermined type of data (column 9, lines 3-6); and performing any retry of reading or writing of the data if the data is of the predetermined type of data (column 9, lines 15).

However, Kanota et al. do not disclose performing retry of reading or writing of the data within a remaining retrying limitation time.

Makita et al. disclose performing retry of reading or writing of the data within a remaining retrying limitation time ([0012]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate performing retry of reading or writing of the data within a remaining retrying limitation time disclosed by Makita et al. into the method disclosed by Kanota et al. so that a real-time continuity of the AV digital stream data can be secured. The incorporated feature would enhance the quality of the playback of the AV data.

Regarding claim 11, Kanota et al. also disclose performing a number of retries of reading or writing of the data that is not larger than a predetermined maximum number if the data is not of the predetermined type of data (column 9, lines 3-15, the predetermined type of data is "non-AV data).

Claim 21 is rejected for the same reason as discussed in claim 10 above.

Claim 22 is rejected for the same reason as discussed in claim 11 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner